

What is claimed is:

- 1 1. A optical system for image capturing, comprising
 - 2 a special optical component consists of a first lens
 - 3 and a triangular prism as a whole;
 - 4 a uniform light source;
 - 5 a detector installed at the first lens side of said
 - 6 special optical component;
 - 7 a second lens installed between said special optical
 - 8 component and said detector; and
 - 9 an aperture installed between said special optical
 - 10 component and said second lens.
- 1 2. The optical system of claim 1 wherein said uniform
- 2 light source is at least two pairs of LEDs.
- 1 3. The optical system of claim 1 wherein said first
- 2 lens is a Plano-convex lens.
- 1 4. The optical system of claim 1 wherein said detector
- 2 is a CMOS sensor.

1 5. A method for image capturing, comprising

2 Installing a uniform light source at the side of
3 a triangular prism of a special optical component,
4 wherein said special optical component consists of
5 a first lens and said triangular prism;

6 Installing said detector at the side of said first
7 lens of said special optical component;

8 Installing an second lens between said special
9 optical component and said detector; and

10 Installing an aperture between said special optical
11 component and said second lens.

1 6. The method of claim 5 wherein said uniform light
2 source is at least two pairs of LEDs.

1 7. The method of claim 5 wherein said first lens is
2 a Plano-convex lens.

1 8. The method of claim 5 wherein said detector is a CMOS sensor.

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